MISSOURI DEPARTMENT OF TRANSPORTATION
ADULT PASSENGER NON-SCHOOL BUS TYPE – MEDIUM DUTY VEHICLE SPECIFICATIONS

1. The intent of these general specifications is to describe a commercial non-school bus type vehicle that will be manufactured, structured and assembled by using best quality materials, components and workmanship in accordance with sound engineering principles and manufacturing practices to provide safe and reliable highway and city transportation for ambulatory and nonambulatory adult passengers. The completed vehicle will meet all FMVSS, at time of delivery.

   MoDOT reserves the right to conduct in-plant inspections.

   Excessive specification exceptions that are intended to "cheapen down" these vehicles will be cause for bid rejection.

   Chassis types – Navistar, Freightliner B65, or General Motors 5500 or approved equal 2007 or 2008 model year 19,000 GVW chassis. If a 2007 model can't be supplied, a 2008 will be substituted for the same price. (This will only be exercised if the contractor fails to order a 2007 chassis in time.) Wheelbase approximates 272".

2. Body Exterior, Construction - The materials used and the assembly method of the roof, side panels, and floor will be the manufacturer's standard construction, uniformly connected, lapped and sealed providing a weather and dust proof body. Drip rails shall be installed above all doors to prevent water leakage into bus. Each vehicle will be thoroughly water tested before delivery.

3. Body Interior Construction - The inner construction must provide equal protection to passengers regardless of where they are seated.

   The inner frame, at the floor, front and rear ends shall be heavy steel construction that will provide solid support for inner crash shield and exterior panels. The frame shall be securely anchored to adequately spaced steel floor cross members.

   The entire structure must provide maximum resistance to impact and collision and meet or exceed the rollover protection requirement of all federal regulations. FMVSS 220.

   Headliner - Shall be full length for driver and passenger area. This headliner shall have longitudinal and cross member supports where needed to prevent flexing and vibrations. The headliner above the driver's area shall provide sound deadening qualities.

   Side and End Panels - To be complete on all doors, sidewalls and rear end.

   The body exterior and interior shall meet or exceed the State and National

recommendations. It shall conform to Federal Motor Vehicle Safety Standards and meet all static load test requirements.

A statement of compliance with **all** FMVSS will be provided with bid.

Floor and Floor Covering - The entire floor except driver area shall be made level from end to end and side to side with marine grade plywood a minimum of 3/4 " thick securely installed by glue, screws or a combination of methods that will assure a permanent fitted floor. The plywood floor shall be covered with a minimum of 2.2 mm thick vinyl transit type floor covering. All seams will be heat welded when mating of similar surfaces. There will also be an aluminum, polyethylene or galvanized steel belly pan located under the floor to prevent moisture entrance. Anti-skid flooring throughout.

The entranceway and aisle will be non-skid type and under the seats it will be smooth with anti-skid properties. The driver area and wheelhouse covering may be either smooth or anti-skid type. All floor coverings shall meet ADA requirement 49 CFR38.25. Include a white standee line meeting Federal Motor Carrier Safety Regulations, 49 CFR 393.90.

All exposed edges around the wall, doors and entranceways shall be trimmed in a manner to eliminate moisture entry to the sub-floor. There will be no exposed interior wheel wells. Any quality waterproof seal between floor and wall junction is acceptable.

Insulation - The interior dash firewall, lower panels, doors, floor, sidewalls, roof headliner and etc. shall be insulated.

4. Grabrail, Grabhandle, Guardrails and Stanchions - A floor to ceiling stanchion shall be installed near the aisle and immediately left of the entrance door. This stanchion shall be connected to the vehicle right side by a guardrail approximately 30" above the floor.

A floor to ceiling stanchion shall be installed in close proximity to the rear, right side of the driver's seat. This stanchion shall be connected to the vehicle's left hand sidewall by a guardrail approximately 30" above the floor. The stanchion and guardrail shall not impair the driver's seat adjustment. There will also be a floor to ceiling 3/8" Plexiglas shield mounted to this stanchion protect driver from foreign objects. This barrier will not interfere with driver’s seat adjustment.

A guardrail approximately 30" above the floor shall be installed to the vehicle left and right sides between the two passenger front seats, and wheelchair areas.

Solid material modesty panels shall be provided with the entry door stanchion and guardrail, and the left and right hand front seat guardrails.

Spacing of these guardrails and panels must provide adequate passenger knee room.

A grabrail or handle a minimum of 18" in length shall be installed to the left of the right hand front entrance door within easy reach of boarding passengers to discourage the use of any door opening device for support when boarding.

There will also be two overhead grabrails mounted securely above the passenger aisle way. These grabrails will meet ADA requirement 49 CFR 38.29.

There shall be a passenger grabrail mounted along the right side of the stepwell. This handle is to be approximately 18" in length and to be securely mounted to the vehicle to provide a secure handhold for boarding passengers. All handrails and stanchions will meet ADA requirement 49 CFR 38.29.

A stanchion or platform will be provided to protect stepwell opening during lift deployment. A 1" maximum gap is all that is acceptable.

Stanchions and guardrails shall be tubular metal covered with pre-molded energy absorbing padding. All stanchions and guardrails will be mounted securely enough to elimate vibrating loose. They are expected to serve seven years in transit use.

Seating - See Attached Exhibit - The arrangements shall provide seating as listed below on Item 16 and as shown on the appropriate exhibit. All seats will meet or exceed FMVSS 210. Please include certification with bid.

DRIVER'S SEAT

The driver's seat shall be ergonomically and orthopedically designed to give the driver maximum comfort. Driver's seat will be of best quality, fully adjustable air ride seat with two chamber air lumbar supports in the seat back and meet all applicable Federal Motor Vehicle Safety Standards including Nos. 207, 209, 210 and 302. Headrest will be vinyl covered. Seat will be a high back design with an adjustable headrest.

The driver's seat shall be adjustable so that persons ranging in size from the 95th-percentile male to the 50th percentile female may operate the coach. The driver's seat cushion shall have a minimum width of 18 inches, a length of 16 to 18 inches, and adjustable rearward slope of 5+ or -5 degrees. The seat to have a stamped steel high back. Folding armrests will be on the left and right side of the seat.

The angle formed between the seat back and the seat cushion shall have a minimum adjustment range of 95 to 110 degrees. the angle of both the seat back and seat cushion shall be independently adjustable. Height of the seat shall be adjustable so that the distance between the top of the uncompressed seat cushion and the floor may vary between 17 and 21 inches. The seat shall be adjustable forward and rearward for a minimum travel of nine (9") inches. While seated, the driver shall be able to make all of these adjustments by hand without complexity, excessive effort, or being pinched. Adjustments mechanisms shall hold the adjustments and shall not be subject to inadvertent changes.

The seat shall be upholstered in transit quality cloth type fabric materials and color coordinated with the coach interior. The seat shall have a manual lumbar support integrated into the seat back. The top area of the seatback shall be vinyl for easy cleaning. The driver's seat shall be equipped with a back retracting seatbelt meeting or exceeding all FMVSS

requirements. Seat may be a USSC Model 9100 ALX3, Recaro or approved equal.

PASSENGER SEATS

All one-passenger seats shall be approximately 18" wide.

Forward facing seats will have padded grabhandles on the aisle sides.

All two-passenger seats shall be a minimum depth of 16"; the backrests shall be a minimum thickness of 2". Mid back style. These seats will be the individual bucket style with ABS backs. All seats will have seat belts (with retractors) for each location. Belts will have a minimum 60" length measured from the seat cushion to the buckle.

All seat cushions and backrests shall be covered with a high quality vinyl material. Seat cushions and backrests shall have full depth foam padding. The seat cushion padding shall have a density (4" minimum) sufficient to support occupants without bottoming. All seat cushion colors will be co-coordinated with exterior color scheme.

Seats will have vertical stitching and will have foam and vinyl cover material that will ensure at least a 7-year useful life. (At least a level 3 vinyl)

All bolts used in attaching the seats, seat belts, wheelchair securement devices and seat accessories will be a grade 5 rating or higher. All attachments will utilize either lock washers or lock nuts to prevent loosening due to vibration.

A walk-through aisle between right and left hand seats shall be a minimum of 14".

5. Windshield, Door Glass and Window Glass - Safety plate windshield and window glass all around.

The windshield shall be fixed glass.

Passenger side windows shall be provided throughout the passenger area (T-slider). These windows will be a horizontal opening type that easily open and close. These windows shall meet all the latest federal regulations for retention and release. Kick-out type windows will be hinged at the top. All windows that are considered as emergency exits will be clearly marked. A full-length drip molding approximate 3/4" will be installed. The ventilation section of the window shall be located at the top so seating does not interfere with operation. Passenger windows will be Approximate 40" x 29" in size.

The driver position, on buses with right hand front entrance door only, shall have a window that can be opened for ventilation at the left side.

The dual right hand passenger entrance doors shall have full-length windows that will allow the driver to judge curb locations.

The emergency rear door shall have upper and lower fixed glass with a red light and signage

denoting use as an emergency exit. The lighting and signage will meet FMCSR 393.92.

There will be glass on each side of the emergency door, approximately 6" x 30".

The windshield, driver position side window, and rear emergency door glass will be tinted. The passenger entrance door glass will be tinted in the upper part and may be clear in the lower part.

All passenger area side window glass will be tinted. An approximate tinting of 28%-30% light transfer is acceptable.

All side windows will have inside latches for security.

All windows, doors, and windshield will be installed to keep water and dust leakage to an absolute minimum. Proper sealing during installation is essential. All doors and side windows will have a 3/4" drip molding installed over them.

6. Doors

Front - One door right-hand (RH), or two doors left-hand (LH) and right-hand (RH) acceptable.

First Entrance LH - If required - This door shall be the chassis manufacturer's standard front side door with tinted drop glass and ventipane, armrest and lock. This door may be modified if necessary.

Entrance RH - Main service door may be either forward folding, in-out or out-out opening type. Door will be air operated with emergency and out of service dumps. Control motors to be Vapor or approved equal. Plexiglass is not acceptable for the main viewing area of the door.

This door shall provide no stoop entry headroom with a minimum of 72" entrance height from the top of the first entrance step to the door headliners. The minimum width shall be 24". The top of this door entrance shall be fully enclosed and protected from weather and other elements. It shall have protective padding to prevent head injury when entering or exiting.

All vehicles will have an air or electric operated service door. These air doors will also be forward folding, in out or out-out opening type. A switch from the driver's area will operate the door. Switch will be located at or below shoulder height in a location conveniently and easily accessible to the driver and suitable for frequent cycles (30 – 60 per hour). The door and control arms will be located above the door area, not beneath the stepwell. Plexiglas will not be acceptable for use in service doors.

The main service door will be designed to cycle at least 30 – 60 per hour with a minimum amount of problems. Door frames and hinges/pivot post are to be heavy duty construction designed to operated the above referenced cycles 12 hours a day, 7 days a week for the

design life of the vehicle without failure.

The service door shall have a below floor level entrance stepwell, with a minimum of two steps. These steps shall be stationery; corrosion resistant steel adequately braced and be an integral part of the basic structure. The height from ground to top of first step of empty vehicle be a maximum of 12-1/2" and a minimum of 10". Additional step heights will be a maximum of 9"; the head depth for all steps shall be a minimum of 8". All of the steps shall be level and the risers shall be vertical and not angled. These steps will be equipped with steel reinforced protection to lessen curb damage.

Each step will be covered with molded rubber or vinyl. The step covering will be non-skid type tread with white or yellow nosing. The riser shall be covered or coated with scuff resistant material.

These steps will be fully recessed, enclosed and protected from weather and other elements.

Stepwell lights shall be provided and automatically operated by door control.

The entire door shall be weather stripped to provide a water and airtight seal. The door edge seals will be the over-lapping type to provide maximum sealing ability.

The door openings shall be structurally reinforced to have the same structural integrity as the body.

The entranceway shall be protected from weather and other elements and be padded to prevent head and other injuries to passengers when exiting or entering.

Rear Emergency Door - This door shall be outward opening type, clearly marked as exits. The dimensions of this door will be approximately 32" wide and 50" high. This door shall have an open door warning buzzer and will be sealed to minimize dust and moisture entry. This door will have upper and lower glass and a red light designating it as an emergency exit (per Federal Motor Carrier Safety Regulations 393.92).

This door opening shall have protective padding to prevent head injury when exiting.

The rear emergency door must have an inside latch and release mechanism and outside handle. This door shall have factory installed position hold and check arm. All doors will meet ADA requirement 49 CFR 38.25.

Lift Door – RH side lift door or doors – This entranceway may have either single or dual swing-out type door or doors (single preferred). Catches will be provided to keep doors open during lift operations.

The door(s) height extended from the floor to the top and side-to-side of the entranceway shall provide adequate clearance for the ramp and wheelchair entry (68” minimum).

This entranceway will be located forward in the right hand side of the body, across from the

wheelchair securement area or in the rear of the bus, along the curbside. Please note lift position in each floor plan.

Lift door will meet all requirements of ADA 49 CFR 38.25.

The entranceway shall be protected from weather and other elements and be padded to prevent head and other injuries to passengers when exiting or entering.

Security Lock System - The bus shall be provided with keyed switch that will allow the driver to secure the bus while left unattended without turning of the engine off or locking the doors. The keyed switch when activated will prevent an unattended bus from: being moved; being driven; and from rolling off or being rolled off. The ignition key will not operate the keyed security switch.

The intent of this requirement is to provide a method of securing the bus (prevent someone from moving, driving, or rolling off) while left unattended without turning off the engine or locking the doors.

7. WHEELCHAIR LIFT – Located in Rear of Bus

All lifts must meet all requirement of FMVSS 403 & 404 for public use lifts.

The lift shall be an electro hydraulic type providing power-up, power or gravity down and power automatic fold. The power source shall be the vehicle 12-volt electrical system. The lift will be mounted within the body with access through the right hand side load door or doors. Modifications for the lift installation must not affect the structural integrity of the basic vehicle.

The lift will have 9 interlocks as defined in the FMVSS 403

The lift shall have a minimum rated working load capacity of 800 lbs.

The lift will have no dirty or greasy surfaces that will contact the wheelchair occupant during normal operation.

The lift platform shall be constructed of expanded metal with a minimum usable width of 33” and minimum depth of 51” and will be painted high visibility yellow.

The lift shall have the following:

A manual override to lower, raise and an emergency platform release for use in the event of total power failure.

A platform device that locks in an upward position acting as a curb when the platform has departed ground level and pivots downward upon ground contact, acting as an entry ramp. There will also be a similar safety barrier on the inboard side of the lift platform. Both barriers shall be a minimum of 6” in height.

Door activated power cutoff device to prevent movement of the lift when the vehicle doors are closed.

Two handrails for use by the wheelchair occupant. These rails shall automatically fold up or down with the platform movement and shall fold flat against the platform during transport.

An automatic down pressure cutoff device shall stop downward movement of the platform upon contact with any obstruction or the ground.

The lift shall have automatic controls to perform all functions. The control shall be hand held, cord mounted console control, with sufficient cord length to allow operator to control the lift from inside or outside.

Any part of the lift assembly protruding into the body that could be hazardous must be properly padded for passenger protection.

The electrohydraulic lift system shall have a monitoring device requiring no tools to allow for a quick and easy fluid level check.

Both types of lift systems and mechanisms must be easily accessible for repair and maintenance without dismantling and removal from body. The lift circuit breakers will be mounted near the second battery and in the battery box.

The preferred lift will be a S-2500 Series Ricon, Maxon WL-7, Braun NCL 919 IB, Braun NCL 917 IB or approved equal.

Lifts other than those specified will be considered but they must be equal in type, quality, and performance. Descriptive literature and detailed specifications must be included with your bid. All lifts will meet requirements of ADA 49 CFR 38.23.

8. Wheelchair Securement Area

Positive fastening retractable wheelchair lock-in devices shall be provided for each wheelchair position.

Each securement device will consist of a four point, retractable belt hold down system complete with all belts, hardware and fittings required to make a complete wheelchair securement device.

The four belts will attach to the wheelchair frame and to a series of tracks securely attached to and recessed in the floor of the bus. Each track will allow infinite spacing for adapting to any size wheelchair. Features of the retractors are:

A. Dual steel tensioning knobs on each retractor.
B. Retractors are interchangeable between all positions.
C. Retractors will be equipped with “J” hooks.

D. Retractors will be equipped with tension release levers.
E. Heavy-duty automatic retractors providing automatic tensioning and adjustment for tie down belts.

Four tracks shall be attached to the floor with 3/8" diameter bolts. These bolts will have adequate washers to make a secure attachment. These tracks will run the entire width of the securement locations and will allow the retractors to slide to any position within the length of the track. Securement system maybe a Q'Straint Model 8100 Al Delux, Sure-Lok Titan or approved equal.

There shall be provisions for a storage compartment for the hardware and retractors inside the bus.

There will be four horizontal flush mounted A tracks running the entire width of the securement locations.

Each securement area will be designated as such.

Include four 16" "Quick Straps" for each wheelchair location.

Easy to secure and release fully retractable seat belts and shoulder harnesses which encompass both the wheelchair and occupant shall be included for each wheelchair position. All securement devices and lift area designs will meet ADA requirement 49 CFR 38.23.

9. Air Conditioning, Heating, Defrosting and Cooling - Front and Rear

Heating and Defrosting - The high out-put heating system shall consist of front units to provide heat in the driver's, the entranceway and surrounding area. Two underseat units shall provide for passenger comfort in the rear compartment. They shall be floor mounted and provide a minimum of 30,000 BTU's each. One heater will be mounted behind the rear axle and the other will be mounted just in front of the rear axle. Each heater will have it's own separate two-speed (off, low, and high) fan control (Dash Mounted).

An integral defrosting and defogging system shall keep the windshield and all windows free of frost and condensation.

The system shall be supplied with hot water from the vehicle engine. Shut-off valves shall be provided and easily access from under the hood. There will also be a heater pump to assist in hot water circulation.

A description of the system and the BTU output will be included with all bids.

All controls shall be installed in a panel easily accessible to the driver.

Cooling - The system shall be powered by the vehicle engine and have a rated total output capacity of approximately 100,000 BTU's. All system components (body and chassis) will be compatible with R-134A Refrigerant. Two compressors will be utilized and will be

driven by a serpentine belt drive. All bolts used in mount compressors and other belt driven components will be a grade 5 or higher. No compressors will interfere with access to engine fuel filter.

Cool air distribution ducts shall be of a free-blow design. Adjustable air outlets to control and direct the flow of cooled air shall be installed for the comfort of passengers. The rear-cooling unit shall have a capacity of at least 90,000 BTU's. The rear unit will have individual temperature control and a rheostat fan control switch that provides infinite or 3-speed control (off, low, medium, high).

Chassis manufacturer's optional front air conditioning will be included. Approximately 12,000 BTU's. This system will provide cooling in the front of the bus and have adjustable outlets for the driver to control and direct the flow of air.

All hoses will be of the quick click design and will be nylon lined.

All controls shall be installed in a panel easily accessible to the driver.

The skirt-mounted condensers will have rustproof protection mounted front and rear to prevent damage from foreign objects or material thrown from tires. System will utilize at least one 2-fan and one 3-fan condenser.

Roof Ventilator/Emergency Exit - Two dual purpose manually operated roof ventilator/emergency exit shall be installed in the roof of the vehicle at approximately the center of the passenger compartment. The hatch shall be 23" x 23" minimum and shall be installed so that when it is open and the vehicle is in a forward motion fresh air will be provided inside the vehicle. The hatch shall be a Transpec, Inc. Model 1000. Dual Purpose Safety Vent, Transpec Model 1075 Low profile, or an approved equal. Transpec Econo Model is not acceptable.

For increased circulation in the driver area, a two-speed fan with a minimum diameter of 6" shall be mounted on the dash.

Heating and Cooling Certification - The supplier must certify that the heating and cooling system he proposes to use will be adequate for passenger and driver comfort based on interior dimensions and anticipated passenger load.

Ignition Cutoff - An automatic ignition body circuit cutoff for heaters, defroster, and air conditioning shall be provided.

10. Chassis and Body - Requirements and Performance

The chassis, fully loaded and equipped body, must provide proper weight distribution. The front and rear weights must not exceed the chassis manufacturer's gross axle weight rating.

Front Section, Exterior - Shall have manufacturer's standard grill; grill frame, lamp moldings, etc.

Front Section, Interior - Shall have all items regularly furnished as standard by the manufacturer.

Lights and Signals

Exterior - High and low beam halogen headlights, parking, tail, stop, backup, front and side marker lights or reflectors, license plate, hazard warning flashers and directional signals. There will also be a reverse or back-up alarm and third center-mounted brake light.

Interior - Instrument panel, front and rear overhead lights, and all doors. Overhead lighting activated by a dash-mounted switch, shall provide lighting intensity at a reading level. All door lights and RH front door stepwell shall illuminate automatically when doors are open. All vehicles shall have priority seating signs as required by ADA requirement 49 CFR 38.27. All body manufacturing installed switches shall be a push-pull or heavy-duty rocker type. Emergency door will have signage and lighting that meet FMCSR 393.92.

All interior lights shall be adequately recessed so as to not be a hazard to occupants. Interior light fixtures shall be operable with or without engine running. All interior and exterior lighting will meet ADA requirement 49 CFR 38.31.

All interior wiring shall be insulated and covered.

Instrument Panel and Instruments - Standard panel with gauge instrumentation for tachometer, fuel, engine temperature, oil pressure, alternator, speedometer, odometer, and air pressure.

Horns - Dual electric.

Mirrors, Rearview - Interior, adequate size to provide the driver a view of the passenger area. (Approximate 8" x 20).

Mirrors, Rearview Exterior (RH & LH) - Adjustable type, approximate size 7" x 10". The mirrors must be mounted so as not to obstruct the driver's front or side vision. There will be a smaller convex mirrors (RH,LH) mounted separately. (6-8" diameter). Mirrors will be heated and will have adjustment controls from the driver’s area.

Windshield Wiper and Washer - Electric, two-speed with intermittent wipe and mist option.

Vehicle will also be equipped with a Pentax fast idle control solenoid, InterMotive manufacturer standard fast idle.

Sun Visor - For driver.

Radio - AM-FM push-button CD player with internal and external P.A. speaker system to meet ADA requirement 38.35. Radio will have dominant clock display on dial.

Passenger Signal System - A stop request passenger to driver signal shall be provided, easily accessible to ambulatory and non-ambulatory passengers on each side. This system will meet ADA requirement 49 CFR 38.37. If pull cords are used, they will be made of vinyl-coated cable.

Other Body and Chassis Features - Include audible back-up alarm, center mounted stoplight, side turn signal indicators, front and rear mud flaps, cruise control, tilt and telescoping steering wheel, and front tow hooks.

Fare Box Stand – Include a stand for mounting a Diamond E-5 fare box in a location that is easily accessible to both driver and passenger.

Engine - In-line 6 cylinder or V-8 diesel 210 horsepower minimum. The engine shall be equipped with a turbo charger and electronic fuel injection, full flow replaceable spin on oil filter, and dry type air filter, external oil cooler and 1000-watt engine block heater for cold weather operation. The engine compartment will also have extra insulation to provide sound deadening qualities for additional passenger and driver comfort.

Cooling System - Heavy duty or maximum cooling radiator with overflow recovery reservoir and permanent type anti-freeze installed to protect the vehicle to at least 20 degrees below zero. This system will be capable of keeping engine within operating temperature while in stop and go transit service. Engine will also have an electric fan clutch.

Transmission - Automatic, Allison 2200 (or approved equal), 4-speed with an exterior oil cooler, filter, and parking position.

Alternator(s) - Minimum of 200 amperes. All mounting bolts will be grade 5 or higher.

Batteries (2) - HD with adequate CCA and reserve capacity (Minimum 625 CCA each) for operating bus and wheelchair lift components. Batteries to have on emergency disconnect switch located in driver's area.

Steering - Power. Include factory tilt and telescoping wheel and cruise control.

Brakes - HD power, front wheel disc and rear drum, or four wheel front and rear disc system.

Axle, Front - Minimum of 8,000 lb. capacity.

Axle, Rear - Minimum of 19,000 lb. capacity, ratio approximates 4.5 to one. Ratio to provide an approximate maximum road speed at 65 mph at maximum governed engine speed.

Drive Shaft Guard(s) - Minimum requirement. One for each drive shaft section.

Springs, Front - Heavy-duty leaf. Rated for axle capacity.

Springs, Rear - Heavy duty, leaf type. Rated for axle capacity. Include (2) two 20,000 1b. total capacity air bags, reservoir tank and engine mounted air compressor. Springs to meet GVW requirements of vehicle. Also include a heated Bendix air dryer for the air system (or approved equal). Air compressor may be electric powered.

Shock Absorbers- Heavy duty, front and rear. 8,000 lb.

Fuel Tank or Tanks - Minimum capacity 40 gallons with outside fill spout, clearly marked diesel only and equipped with an after market in-line fuel filter that is easily serviceable. (frame mounted) Also include heated fuel-water separator (OEM or aftermarket).

Tires and Wheels - The wheels will conform to the tire and rim association standards. Wheels to be covered with stainless steel covers. The bus shall be equipped with a single piece molded, ventilated type disc wheel with 8-hole stud mounting. All wheel rims shall have the same offset and shall be fully interchangeable with all wheel positions on the bus. One spare wheel rim and tire will be provided with each bus delivered. Spare tire and wheel will be shipped loose. Wheel size will be 19.5x6.

Bumpers - Front and rear heavy-duty chrome or stainless steel.

Undercoating - The entire body understructure shall be covered with a heavy, long lasting undercoating material. Automotive quality undercoating will not be acceptable. Undercoating will meet FMVSS 302 for flammability.

Safety Equipment - New unit to have all the latest standard safety equipment required by laws and regulations.

Emergency Equipment - A fire extinguisher certified for this type vehicle (minimum 5 lb. 10-BC type) and a 16-unit first aid kit with contents recommended for this type and capacity vehicle shall be provided. Three reflective bi-directional triangles shall also be provided. These emergency items shall be securely mounted in the driver area and easily accessible. Vehicle will also have an assortment of five fuses used in vehicle body or chassis electrical, an emergency seat belt cutter and wheel chocks.

Each vehicle will have a blood borne disease kit including the following items:

A. Latex gloves
B. CPR mask
C. Goggles
D. Apron
E. Disinfectant wipes
F. Absorbent and scoop
G. I.D. tag and red plastic bag

First aid kits and bloodborne pathogens kits will be in durable metal or plastic dust and weather tight boxes.

11. The following shall be furnished and included with your bid: (see Item #17 for additional items).

All bidders shall describe and furnish a complete detailed listing of the vehicle, requested drawings and modifications of the equipment he proposes to furnish.

A detailed drawing, showing interior floor plan, dimensions and seating arrangements shall be included.

A SCHEMATIC OF ANY INSTALLED WIRING SHALL BE FURNISHED WITH EACH VEHICLE.
A guarantee that the chassis manufacturer's warranty will be in effect at the time of delivery and acceptance.

A copy of the warranty on the air conditioning, (heating and cooling assemblies).

Priority seating signs that meet ADA requirement 38.27.

12. To be furnished with each vehicle at time of delivery:

One complete set of detailed chassis service manuals covering **all** components per every two buses delivered.

A detailed chassis factory service manual covering all components.

A parts book and a maintenance service manual for all add-on equipment used in modification

An operator's manual for the basic chassis and other systems.

A detailed body manufacturer's parts and service manual, including all wiring diagrams.

No bus is to tow a "chase" vehicle during delivery.

13. Color
Interior - The interior trim, upholstery, seat belts, visors, and etc., will be color keyed to exterior color.

Exterior – One 8" wide painted or vinyl stripe. Base color is white.

14. Advertisements- Decals and all other forms of dealer advertisements will not be allowed.

15. Exceptions to specifications must be clearly noted and included with your bid for consideration. Vehicle will meet a required Federal Motor Carrier Safety Regulations at time of delivery.

16. Floor plan description – This floor plan will have two forward facing wheelchair positions

located in the rear of the bus. There will be three-two passenger fold-a-way seats located at the wheelchair securement locations that can be utilized if there are no mobility aids transported. The remainder of the seats will be two passenger and located as shown on the floor plan. Total capacity – 34 ambulatory and two wheelchairs or 38 ambulatory and zero (no) wheelchairs.

Include as an option on all floor planes. Safety Vision SV 5000, Backing Vision BV 1350, Intermotive Hawkeye HRAS401A (or approved equal) backing vision system.

17. The bidder will supply with the bid: Bid will be considered unresponsive without these items:

- Complete Altoona Test
- An itemized list of domestic produced parts or components used in the manufacturing of the vehicle.
- The estimated cost for each item.
- The estimated total percent of domestic components used in manufacturing of the vehicle.
- Final assembly point and activities at that location.
- A statement of FMVSS compliance
- A statement of FMVSS 210 seats
- A description of heating/defrost BTU
- A certification that heating/cooling is adequate

18. Fold-A-Way Type Seat Requirements

Fold-A-Way type seats shall meet all dimensional, structural and testing requirements of the standard seat specification.

All seats shall be forward facing for ambulatory passengers and fold against the wall when wheelchair space is required.

In the folded position, the seat may extend into the bus no further than 10" installed at 90 degree to maximize space for wheelchair loading and positioning.

In the down, fixed position, the seat may not extend into the aisle more than 36" to preserve aisle space.

Fold-A-Way type seats may be Braun 125 Model High-Back, Freedman 3 step Fold Away, American Seating E-Z fold, or approved equal.